

CLAIMS

1. (Amended) An R-Fe-B based thin film magnet characterized by comprising an R-Fe-B based alloy which contains 28 to 45 percent by mass of R element (where R represents at least one type of rare-earth lanthanide elements), which has a film thickness of 0.2 to 400 μm , and which is physically formed into a film on a base material, wherein the R-Fe-B based alloy has a composite texture comprising $\text{R}_2\text{Fe}_{14}\text{B}$ crystals having a crystal grain diameter of 0.5 to 30 μm and R-element-rich grain boundary phases present at boundaries between the crystals.
2. The R-Fe-B based thin film magnet according to Claim 1, characterized in that c axes, which are easy-to-magnetize axes, of $\text{R}_2\text{Fe}_{14}\text{B}$ crystals are oriented randomly or oriented nearly perpendicularly to a film surface.
3. (Cancelled)
4. (Amended) A method for preparation of the R-Fe-B based thin film magnet according to Claim 1 or 2, the method characterized by comprising the step of heating the R-Fe-B based alloy to 700°C to 1,200°C during physical film formation or/and the following heat treatment, so as to grow crystal grains and form R-element-rich grain boundary phases.